

CLAIMS

1. (original) A method of making a cathode assembly of an FED, comprising:

providing a substrate;

forming an emitter electrode structure on the substrate;

forming a resistive layer over the emitter electrode structure;

forming an insulative layer on a portion of the resistive layer;

forming at least one micropoint emitter in contact with the resistive layer;

forming a conductive grid structure spaced from the at least one micropoint; and

forming a dielectric structure spaced from the at least one micropoint and between the insulative layer and the grid structure.
2. (original) The method of Claim 1 wherein said emitter electrode structure comprises metal.
3. (original) The method of Claim 1 wherein said emitter electrode structure comprises aluminum.
4. (original) The method of Claim 1 wherein said resistive layer comprises silicon.
5. (original) The method of Claim 1 wherein said insulative layer comprises silicon oxide.
6. (original) The method of Claim 1 wherein said insulative layer comprises silicon nitride.
7. (original) The method of Claim 1 wherein said insulative layer comprises a strip having a thickness of about 1000 Å.

8. (previously amended) The method of Claim 1 wherein said substrate comprises glass.

9. (original) The method of claim 1 wherein forming said conductive grid structure and said dielectric structure comprise:

depositing a dielectric layer over the insulative layer and said at least one micropoint emitter;

depositing a conductive layer over the dielectric layer; and

selectively etching openings through the conductive and dielectric layers to expose the at least one micropoint emitter, with walls defining the openings being spaced away from at least one micropoint emitter.

10-16.(withdrawn)

17. (original) In a method of making a field emission device, a method of making a column line structure for an addressing matrix, comprising:

forming a conductive structure;

forming a resistive layer on said conductive structure; and

forming an insulative layer partly covering said resistive layer.

18. (original) The method of Claim 17 wherein said conductive structure comprises metal.

19. (original) The method of Claim 17 wherein said conductive structure comprises aluminum.

20. (original) The method of Claim 17 wherein said resistive layer comprises silicon.

21. (original) The method of Claim 17 wherein said insulative layer comprises silicon oxide.

22. (original) The method of Claim 17 wherein said insulative layer comprises silicon nitride.

23. (original) The method of Claim 17 wherein said insulative layer comprises a strip having a thickness of about 1000 Å.

24. (previously amended) A method of making an FED, comprising: making a cathode assembly, making an anode assembly, and assembling said cathode and anode assemblies, wherein said step of making a cathode assembly includes forming an insulation layer on a portion of a resistive layer on column lines forming part of an addressing matrix to reduce the possibility of shorting between the column lines and a conductive grid structure of the FED.

25. (withdrawn)

26. (original) A method of making an FED, comprising:

making a cathode assembly, making an anode assembly, and assembling the cathode and anode assemblies,

wherein said step of making a cathode assembly comprises

providing a substrate;

forming an emitter electrode structure on the substrate;

forming a resistive layer over the emitter electrode structure;

forming an insulative layer on a portion of the resistive layer;

forming at least one micropoint emitter in contact with the resistive layer;

forming a conductive grid structure spaced from the at least one micropoint; and

forming a dielectric structure spaced from the at least one micropoint and between the insulative layer and the grid structure.

27. (original) The method of Claim 26 wherein said emitter electrode structure comprises metal strips.

28. (original) The method of Claim 26 wherein said emitter electrode structure comprises aluminum strips.

29. (original) The method of Claim 28 wherein said aluminum strips have a thickness of about 1000 Å.

30. (original) The method of Claim 26 wherein said insulative layer comprises silicon oxide.

31. (original) The method of Claim 26 wherein said insulative layer comprises silicon nitride.